

CLAIMS

What is claimed is:

- 5
1. A method for arranging data, said method comprising:
- a) receiving said data comprising a plurality of records, each said record having a plurality of attributes;
- b) determining a set of attributes selected from said plurality of attributes, said set of attributes for placement of said plurality of records in a graphically displayable array, said graphically displayable array comprising a plurality of data points, each said data point representing one record of said plurality of records;
- 10 c) arranging said plurality of records to construct said graphically displayable array for presenting said data in a format for detecting relationships between said plurality of records.
- 15 2. A method as recited in Claim 1 wherein said set of attributes comprises:
- at least one dividing attribute,
- a first ordering attribute corresponding to a first axis,
- a second ordering attribute corresponding to a second axis, and
- a visual indicator attribute corresponding to a visual indicator.
- 20 3. A method as recited in Claim 2 wherein said step c) comprises sorting said plurality of records by a first dividing attribute, said first dividing attribute

corresponding to said first axis, and partitioning said plurality of records into groups according to said first dividing attribute;

4. A method as recited in Claim 3 wherein said step c) further comprises:
5 sorting said records of each said group according to said first ordering attribute and said second ordering attribute; and
applying said visual indicator to each of said plurality of records according to said visual indicator attribute.

10 5. A method as recited in Claim 3 wherein said step c) further comprises:
sorting said records of each of said groups according to a second dividing attribute, said second dividing attribute corresponding to said second axis, and partitioning said records of each of said groups into sub-groups according to said second dividing attribute;
15 sorting said records of each said sub-group according to said first ordering attribute and said second ordering attribute; and
applying said visual indicator to each of said plurality of records according to said visual indicator attribute.

20 6. A method as recited in Claim 1 wherein each said data point is represented by a pixel on a display.

7. A method as recited in Claim 2 wherein said first axis is a horizontal axis.

8. A method as recited in Claim 2 wherein said second axis is a vertical axis.

9. A method as recited in Claim 2 wherein said visual indicator is a color.

10. A method as recited in Claim 1 wherein said graphically displayable array is a pixel bar chart.

11. A computer system comprising:

- a bus;
- a display device coupled to said bus;
- a computer-readable memory coupled to said bus; and
- a processor coupled to said bus, said processor for executing a method for arranging data, said method comprising:
 - a) receiving said data comprising a plurality of records, each said record having a plurality of attributes;
 - b) determining a set of attributes selected from said plurality of attributes, said set of attributes for placement of said plurality of records in a graphically

displayable array, said graphically displayable array comprising a plurality of data points, each said data point representing one record of said plurality of records;

- c) arranging said plurality of records to construct said graphically displayable array for presenting said data in a format for detecting relationships
5 between said plurality of records.

12. A computer system as recited in Claim 11 wherein said set of attributes comprises:

- at least one dividing attribute,
10 a first ordering attribute corresponding to a first axis,
a second ordering attribute corresponding to a second axis, and
a visual indicator attribute corresponding to a visual indicator.

13. A computer system as recited in Claim 12 wherein said step c)
15 comprises sorting said plurality of records by a first dividing attribute, said first dividing attribute corresponding to said first axis, and partitioning said plurality of records into groups according to said first dividing attribute;

14. A computer system as recited in Claim 13 wherein said step c) further
20 comprises:

sorting said records of each said group according to said first ordering attribute and said second ordering attribute; and

applying said visual indicator to each of said plurality of records according to said visual indicator attribute.

15 15. A computer system as recited in Claim 13 wherein said step c) further
5 comprises:

 sorting said records of each of said groups according to a second dividing
 attribute, said second dividing attribute corresponding to said second axis, and
 partitioning said records of each of said groups into sub-groups according to said
 second dividing attribute;

10 sorting said records of each said sub-group according to said first ordering
 attribute and said second ordering attribute; and

 applying said visual indicator to each of said plurality of records according to
 said visual indicator attribute.

15 16. A computer system as recited in Claim 11 wherein each said data point
 is represented by a pixel on a display.

 17. A computer system as recited in Claim 12 wherein said first axis is a
 horizontal axis.

20

 18. A computer system as recited in Claim 12 wherein said second axis is a
 vertical axis.

19. A computer system as recited in Claim 12 wherein said visual indicator is a color.

5 20. A computer system as recited in Claim 11 wherein said graphically displayable array is a pixel bar chart.

21. A computer-readable medium having computer-readable program code embodied therein for causing a computer system to perform a method for arranging data, said method comprising:

- 10 a) receiving said data comprising a plurality of records, each said record having a plurality of attributes;
- b) determining a set of attributes selected from said plurality of attributes, said set of attributes for placement of said plurality of records in a graphically displayable array, said graphically displayable array comprising a plurality of data points, each said data point representing one record of said plurality of records;
- 15 c) arranging said plurality of records to construct said graphically displayable array for presenting said data in a format for detecting relationships between said plurality of records.

20

22. A computer-readable medium as recited in Claim 21 wherein said set of attributes comprises:

at least one dividing attribute,
a first ordering attribute corresponding to a first axis,
a second ordering attribute corresponding to a second axis, and
a visual indicator attribute corresponding to a visual indicator.

5

23. A computer-readable medium as recited in Claim 22 wherein said step
c) comprises sorting said plurality of records by a first dividing attribute, said first
dividing attribute corresponding to said first axis, and partitioning said plurality of
records into groups according to said first dividing attribute;

10

24. A computer-readable medium as recited in Claim 23 wherein said step
c) further comprises:

sorting said records of each said group according to said first ordering attribute
and said second ordering attribute; and

15

applying said visual indicator to each of said plurality of records according to
said visual indicator attribute.

20

25. A computer-readable medium as recited in Claim 23 wherein said step
c) further comprises:
sorting said records of each of said groups according to a second dividing
attribute, said second dividing attribute corresponding to said second axis, and

partitioning said records of each of said groups into sub-groups according to said second dividing attribute;

sorting said records of each said sub-group according to said first ordering attribute and said second ordering attribute; and

5 applying said visual indicator to each of said plurality of records according to said visual indicator attribute.

26. A computer-readable medium as recited in Claim 21 wherein each said data point is represented by a pixel on a display.

10

27. A computer-readable medium as recited in Claim 22 wherein said first axis is a horizontal axis.

15

28. A computer-readable medium as recited in Claim 22 wherein said second axis is a vertical axis.

29. A computer-readable medium as recited in Claim 22 wherein said visual indicator is a color.

20

30. A computer-readable medium as recited in Claim 21 wherein said graphically displayable array is a pixel bar chart.